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FIG. 1A (PRIOR ART)

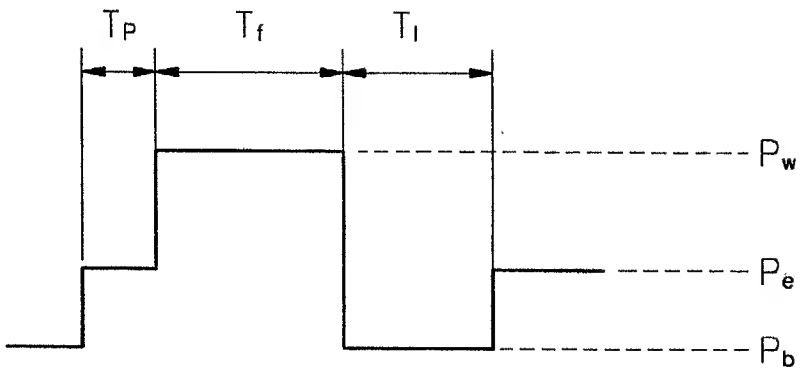

FIG. 1B (PRIOR ART)

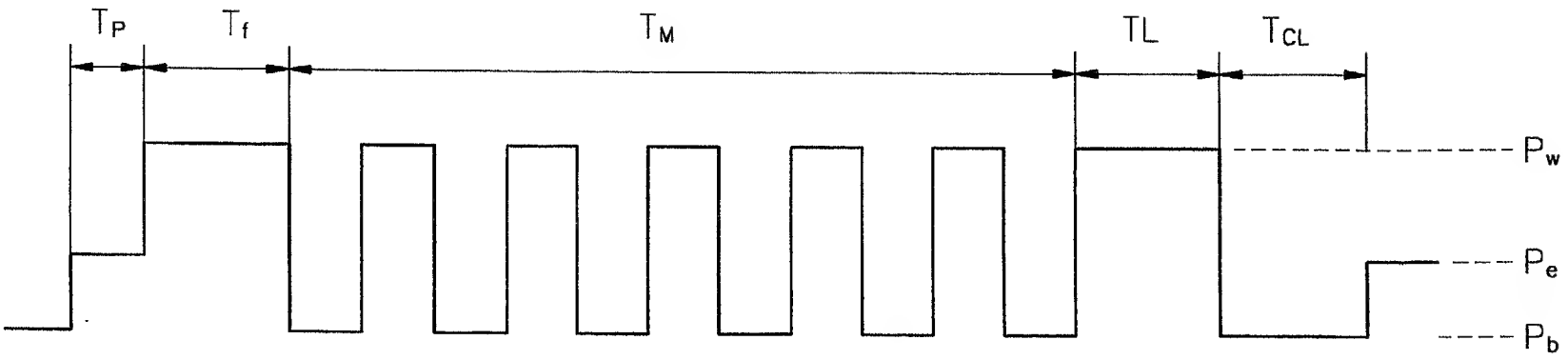

FIG. 2 (PRIOR ART)

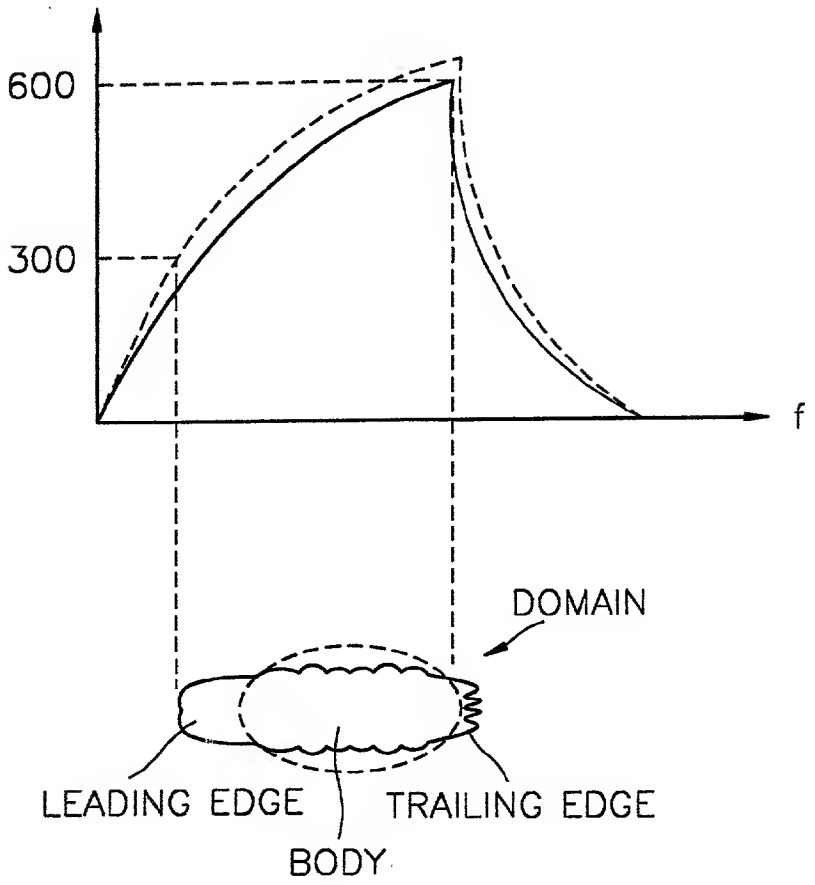

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FIG. 3A

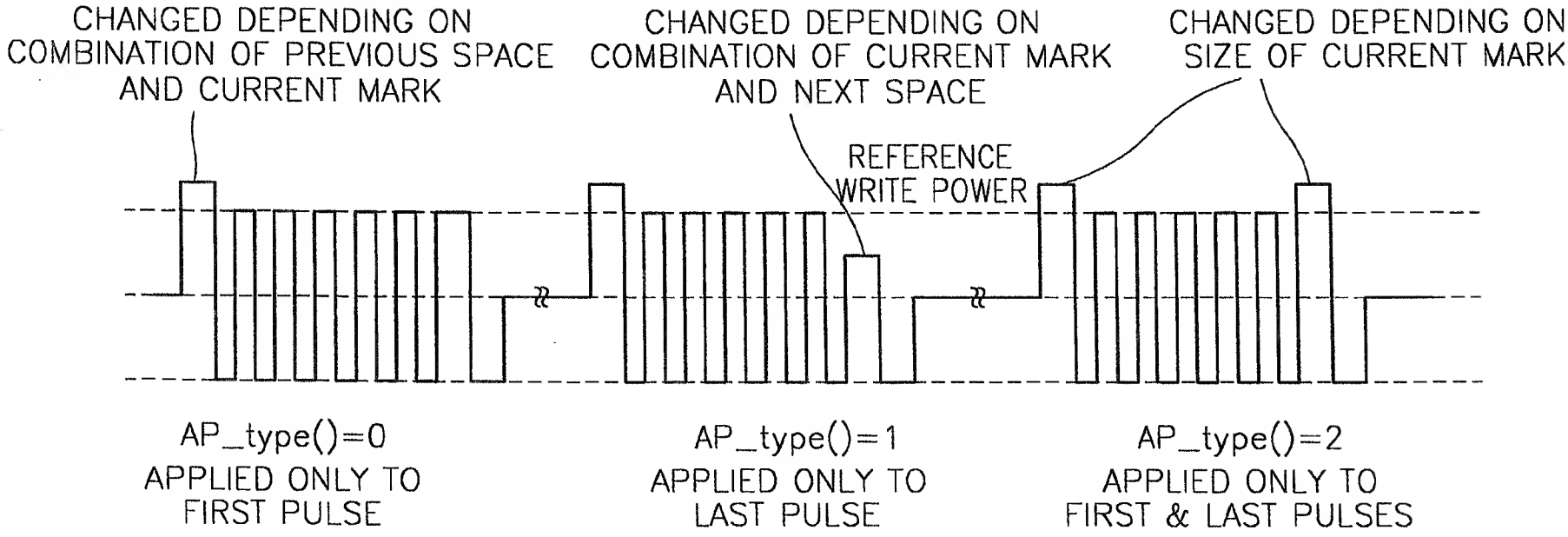

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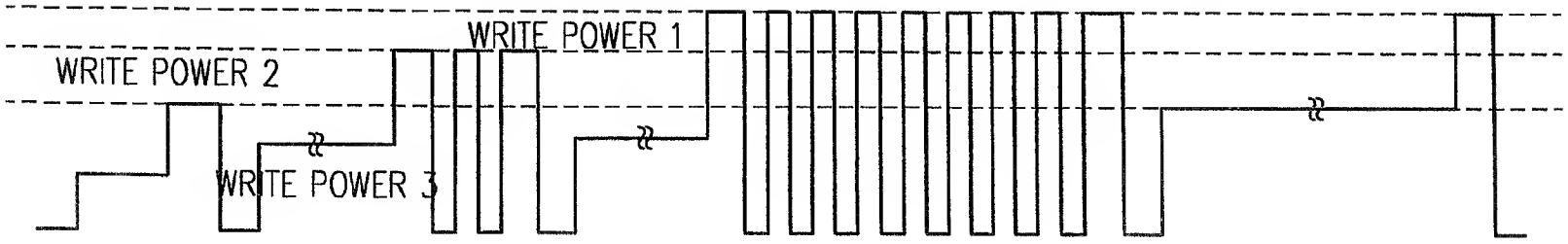
FIG. 3B



AP_type()=3
APPLY ADAPTIVE POWER LEVEL TO WRITE PULSE
DEPENDING ON SIZE OF CURRENT MARK

FIG. 4

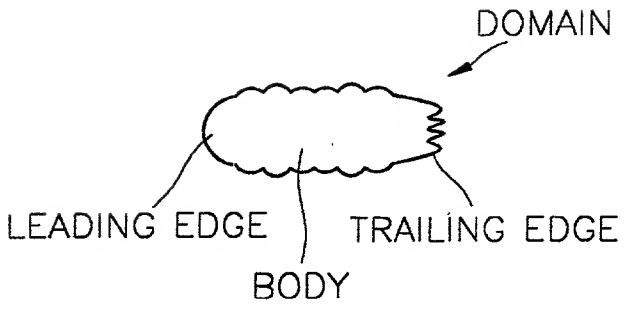

DOMAIN
LEADING EDGE
BODY
TRAILING EDGE

FIG. 5

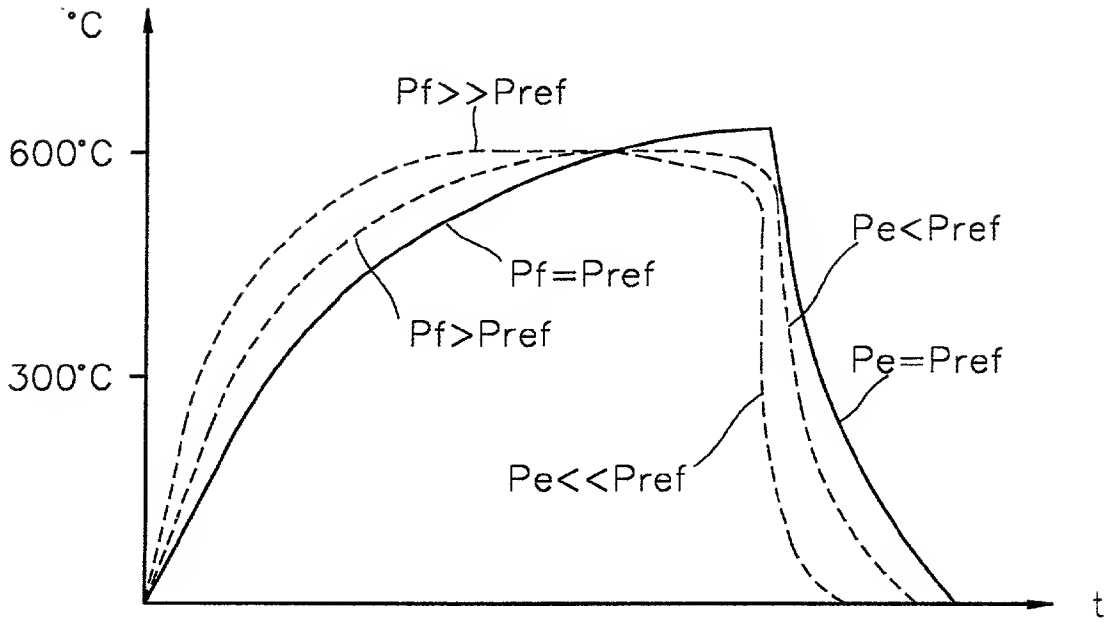

°C
600°C
300°C
Pf>>Pref
Pf=Pref
Pf>Pref
Pe<Pref
Pe=Pref
Pe<<Pref
t

FIG. 6A

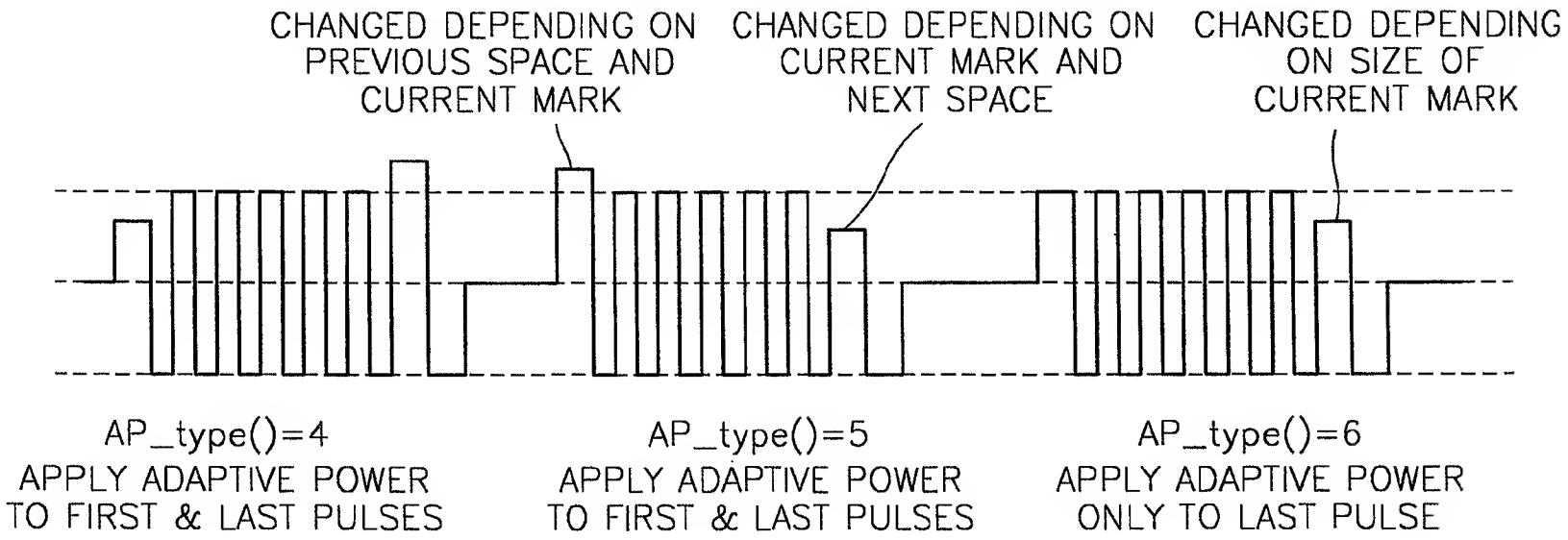
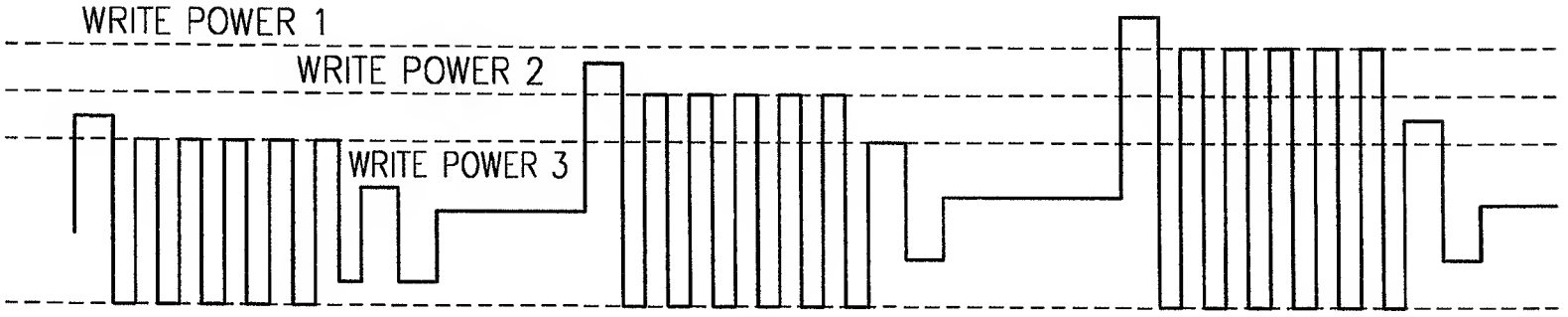

CHANGED DEPENDING ON PREVIOUS SPACE AND CURRENT MARK
CHANGED DEPENDING ON CURRENT MARK AND NEXT SPACE
CHANGED DEPENDING ON SIZE OF CURRENT MARK
AP_type()=4
APPLY ADAPTIVE POWER TO FIRST & LAST PULSES
AP_type()=5
APPLY ADAPTIVE POWER TO FIRST & LAST PULSES
AP_type()=6
APPLY ADAPTIVE POWER ONLY TO LAST PULSE

FIG. 6B



AP_type()=7
APPLY ADAPTIVE POWER TO FIRST & LAST PULSES
AND APPLY ADAPTIVE POWER LEVEL
DEPENDING ON SIZE OF CURRENT MARK

FIG. 7 (PRIOR ART)

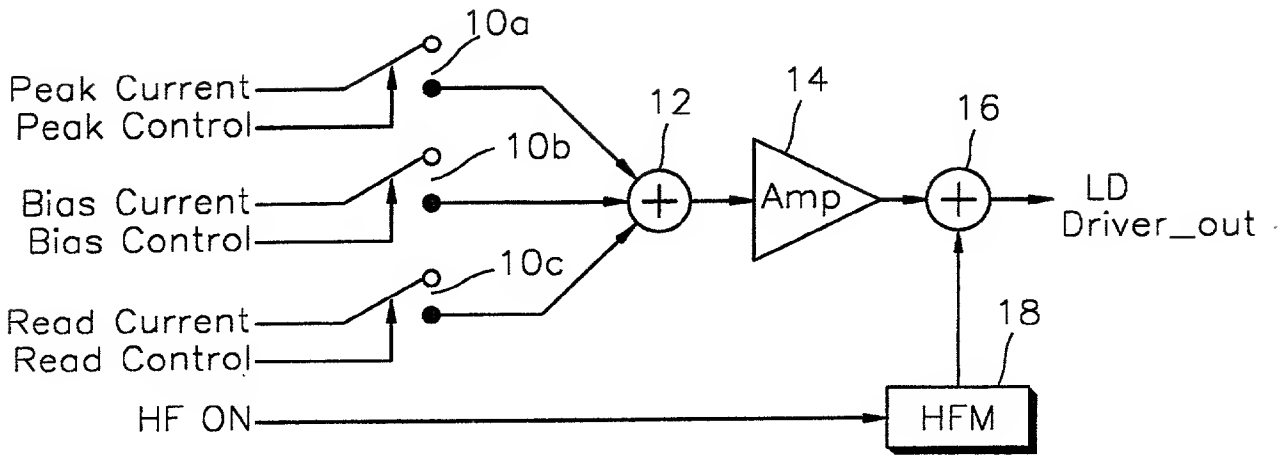


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FIG. 8 (PRIOR ART)

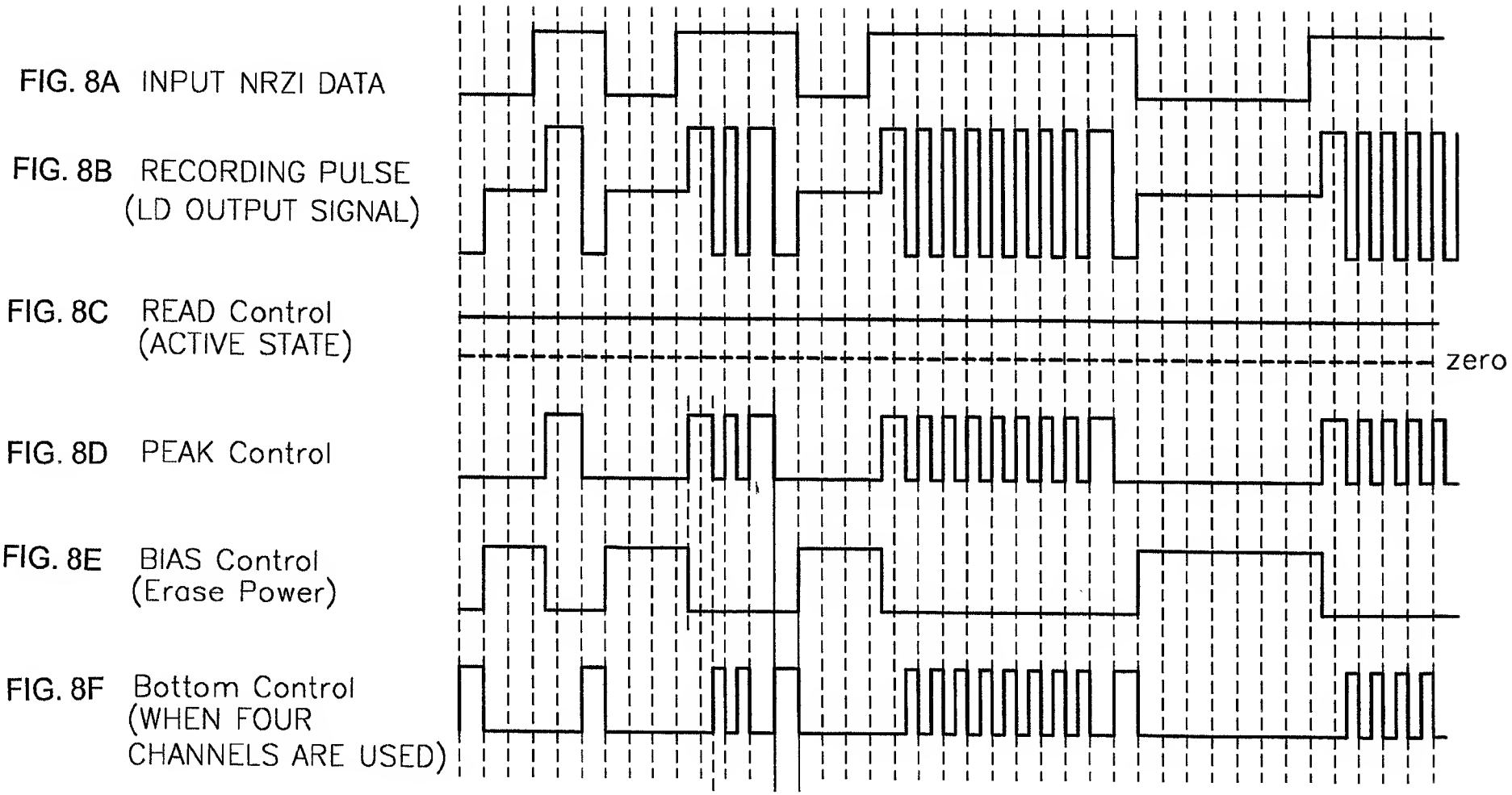

FIG. 9 (PRIOR ART)

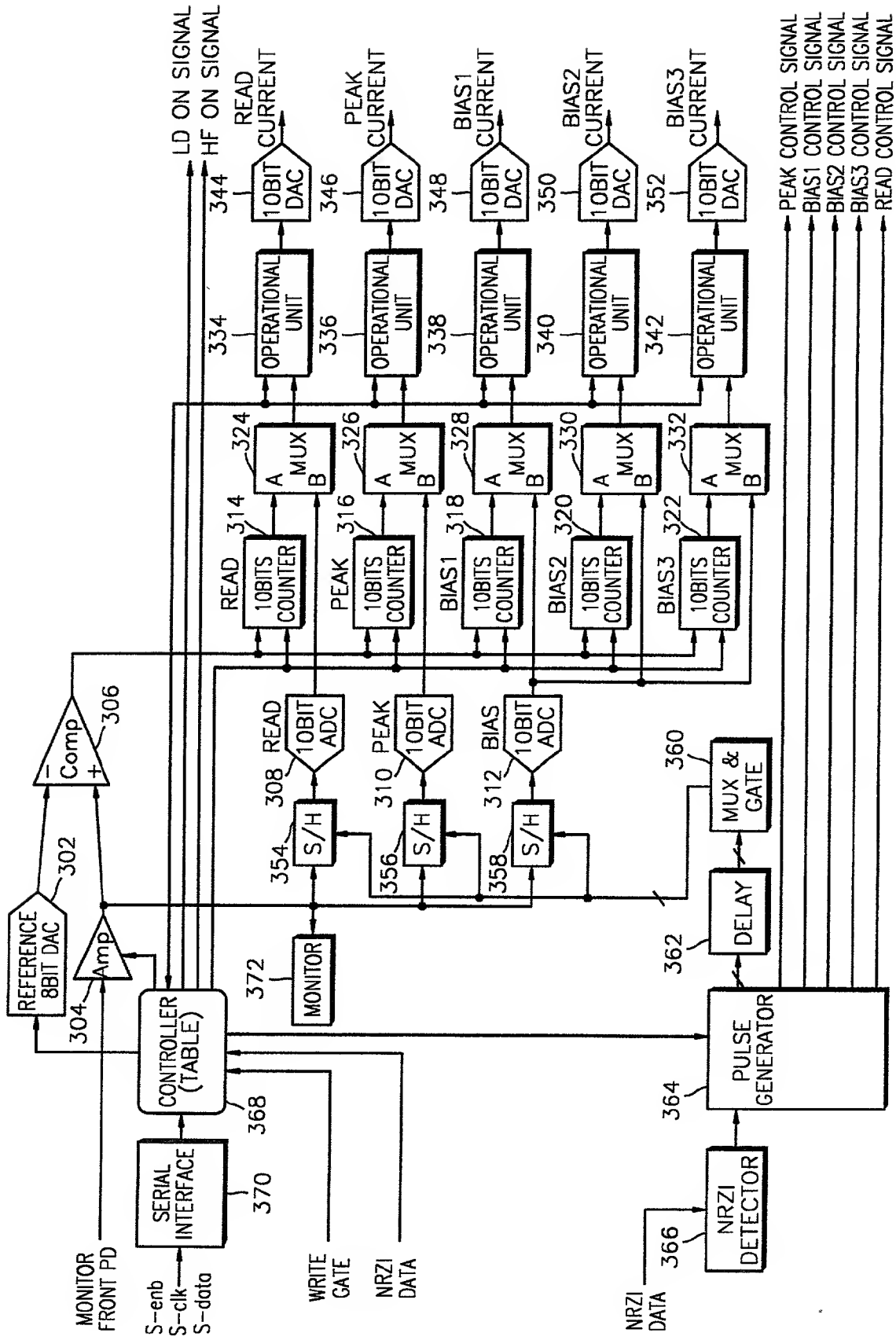

FIG. 10

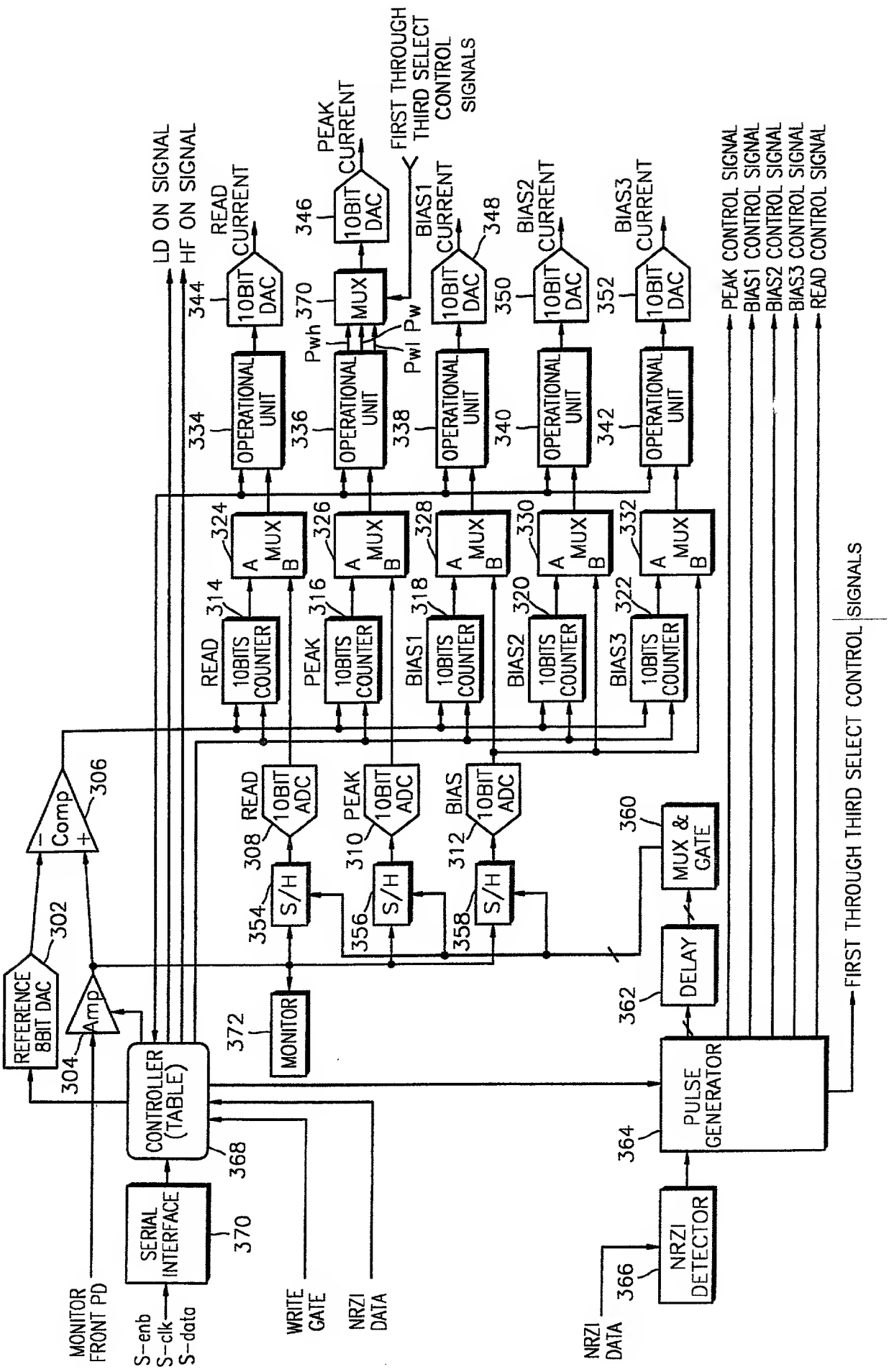
LD ON SIGNAL
HF ON SIGNAL
FIRST THROUGH THIRD SELECT CONTROL SIGNALS
PEAK CONTROL SIGNAL
BIAS1 CONTROL SIGNAL
BIAS2 CONTROL SIGNAL
BIAS3 CONTROL SIGNAL
READ CONTROL SIGNAL
FIRST THROUGH THIRD SELECT CONTROL SIGNALS
REFERENCE 8BIT DAC
302
Amp
304
Comp
306
CONTROLLER (TABLE)
368
SERIAL INTERFACE
370
MONITOR FRONT PD
S-enb
S-clk
S-data
WRITE GATE
NRZI DATA
NRZI DETECTOR
366
NRZI DATA
PULSE GENERATOR
364
DELAY
362
MUX & GATE
360
MONITOR
372
READ 10BIT ADC
308
PEAK 10BIT ADC
310
BIAS 10BIT ADC
312
S/H
354
S/H
356
S/H
358
READ 10BITS COUNTER
314
PEAK 10BITS COUNTER
316
BIAS1 10BITS COUNTER
318
BIAS2 10BITS COUNTER
320
BIAS3 10BITS COUNTER
322
A MUX B
324
A MUX B
326
A MUX B
328
A MUX B
330
A MUX B
332
OPERATIONAL UNIT
334
OPERATIONAL UNIT
336
OPERATIONAL UNIT
338
OPERATIONAL UNIT
340
OPERATIONAL UNIT
342
OPERATIONAL UNIT
344
MUX
370
Pwh
Pwl
Pw
10BIT DAC
346
10BIT DAC
348
10BIT DAC
350
10BIT DAC
352
READ CURRENT
PEAK CURRENT
BIAS1 CURRENT
BIAS2 CURRENT
BIAS3 CURRENT

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FIG. 11

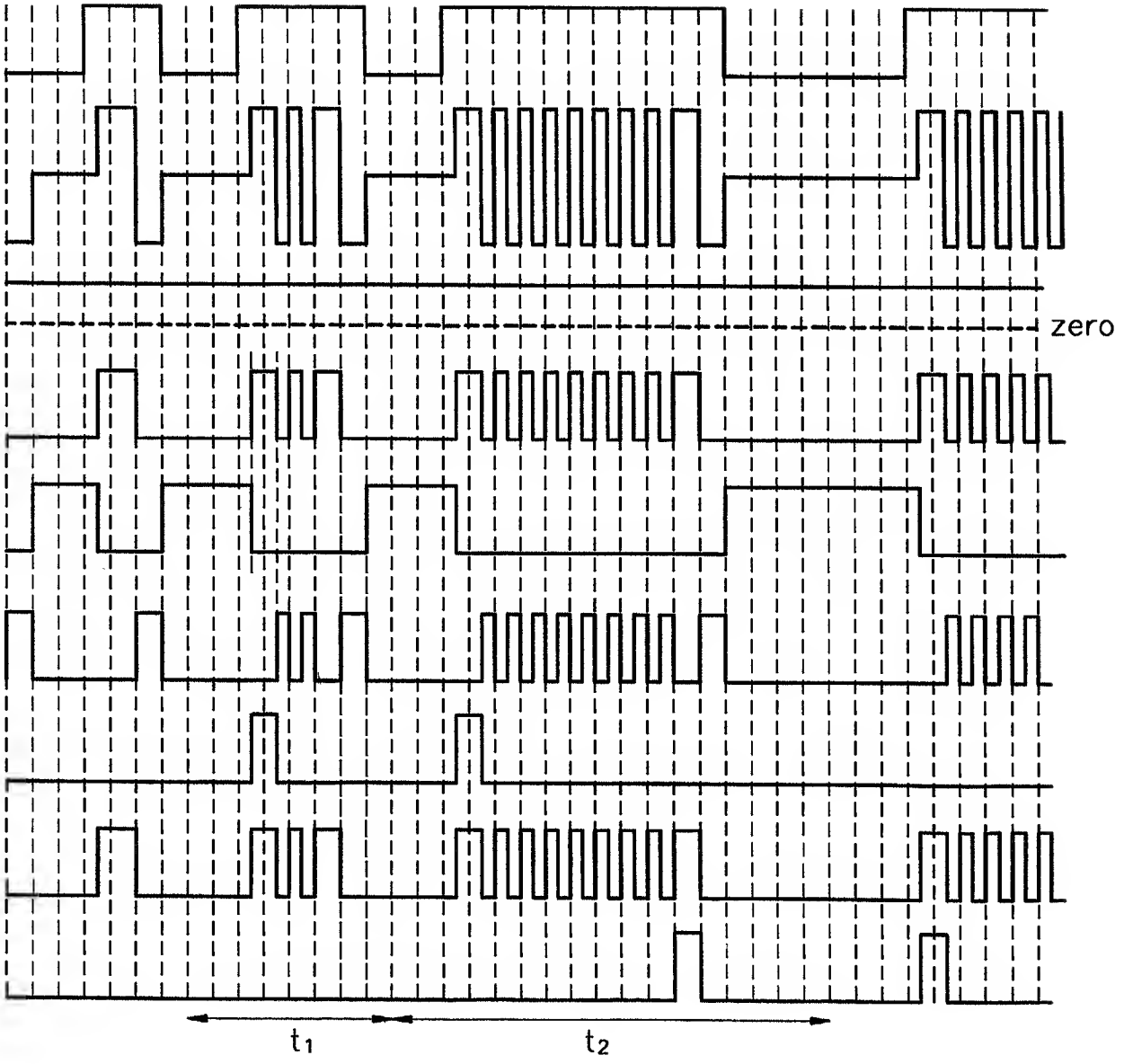

FIG. 11A INPUT NRZI DATA

FIG. 11B RECORDING PULSE (LD OUTPUT SIGNAL)

FIG. 11C READ Control (ACTIVE STATE)

FIG. 11D PEAK Control

FIG. 11E BIAS Control (Erase Power)

FIG. 11F Bottom Control (WHEN FOUR CHANNELS ARE USED)

FIG. 11G FIRST SELECT CONTROL

FIG. 11H SECOND SELECT CONTROL

FIG. 11I THIRD SELECT CONTROL